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EXAMINER	
LI, SHI K	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/754,931	**Applicant(s)** SADANANDA, SANTOSH KUMAR	
	Examiner Shi K. Li	**Art Unit** 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 June 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,2,4,5,7-14,17,19-32 and 70-83_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,2,4,5,7-14,17,19-32 and 70-83_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _6/15/2009_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 June 2009 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2, 4-5, 7-14, 17, 19-32 and 70-83 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation “wherein said databases are not specific to or created responsive to path request messages” in lines 32-33 of the claim. Instant specification, as originally filed, does not describe the limitation in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 14, 70 and 76 recite same or similar limitation.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (P. Ho et al., "A Novel Distributed Control Protocol in Dynamic Wavelength-Routed Optical Networks", IEEE Communications Magazine, November 2002) in view of Smith et al. (U.S. Patent 7,171,124 B2), Roorda et al. (U.S. Patent Application Pub. 2002/0186432 A1) and Desnoyers et al. (U.S. Patent 6,791,948 B1).

Regarding claims 1, 70 and 76, Ho et al. teaches in FIG. 4 an optical network including a plurality of nodes. Ho et al. teaches on page 39, right col. partially adaptive routing wherein each source node is provided with a routing table (equivalent to database of instant claim), in which paths to all its destinations are stored. Ho et al. teaches on page 38, right col., last paragraph wavelength continuity constraint for each lightpath, i.e., the lightpaths represent conversion free connectivity. Ho et al. teaches in FIG. 1(a) lightpaths that area a series of three or more nodes connected by links. When a connection request arrives, the source node selects a path from all the available ones from a routing table. Ho et al. teaches on page 39, right col., second paragraph message scheme for updating the routing table. Ho et al. teaches to send probe messages along potential destinations, i.e., only nodes reachable through said conversion free connectivity. The difference between Ho et al. and the claimed invention is that Ho et al. does not teach grouping paths based on common destination nodes. Smith et al. teaches in FIG. 5B and FIG. 6B grouping paths with common destination nodes for evaluating and selecting the best path for routing. One of ordinary skill in the art would have been motivated to combine the teaching of Smith et al.

with the optical network of Ho et al. because when selecting the best path to a destination, it is necessary to compare and evaluate them to make a decision. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to group paths with common destination nodes, as taught by Smith et al., in the optical network of Ho et al. because when selecting the best path to a destination, it is necessary to compare and evaluate them to make a decision.

The combination of Ho et al. and Smith et al. still fails to teach that a source node can have connections to two difference destinations. It is common sense the network of FIG. 1 is meant to provide connections between any pairs of nodes. It is also obvious that the same method can be applied a plurality of times to find multiple paths from one source node to a plurality of destinations. In fact, Smith et al. cites in col. 4, lines 10-12 Roorda et al. for teaching the operation of the network of FIG. 1. Roorda et al. teaches in FIG. 3A that there are a path between node 20-1 and node 20-2 and a path between node 20-1 and node 20-4. One of ordinary skill in the art would have been motivated to combine the teaching of Roorda et al. with the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resource and is costly and not flexible. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of connections from one source node to a plurality of destinations, as taught by Roorda et al., in the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resources and is costly and not flexible.

The combination of Ho et al., Smith et al. and Roorda et al. still fails to teach receipt of messages carrying end to end path identification information back to the originating access

nodes. Desnoyers et al. teaches in FIG. 1 a network. Desnoyers et al. teaches in col. 2, lines 55-67 that request messages are used to discover paths wherein response messages are returned back to the originating access nodes. One of ordinary skill in the art would have been motivated to combine the teaching of Desnoyers et al. with the modified optical network of Ho et al., Smith et al. and Roorda et al. because using request message requires less processing power and information storage capacity as compared with conventional method such as OSPF. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to return response messages back to the originating access nodes, as taught by Desnoyers et al., in the modified optical network of Ho et al., Smith et al. and Roorda et al. because using request message requires less processing power and information storage capacity as compared with conventional method such as OS.

Regarding claims 2 and 77, Ho et al. teaches on page 40, left col., first paragraph to use customer-defined cost function and link state metrics to select one of the feasible lightpaths for a connection request.

Regarding claim 4, Ho et al. teaches on page 38, right col., first paragraph lightpaths.

Regarding claims 7 and 78-79, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claim 11, Ho et al. teaches on page 40, left col., first paragraph to select a lightpath for a connection request.

Regarding claim 12, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

Regarding claim 14, Ho et al. teaches on page 40, left col., first paragraph to use customer-defined cost function and link state metrics to select one of the feasible lightpaths for a connection request. Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first, paragraph to select a lightpath and a wavelength for a connection request.

Regarding claim 17, Ho et al. teaches on page 38, right col., first paragraph lightpaths.

Regarding claim 20, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claims 24-25, Ho et al. teaches on page 40, left col., first paragraph to select a lightpath for a connection request.

Regarding claim 26-27, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

Regarding claims 73-74, Ho et al. teaches on page 38, right col., first paragraph lightpaths which is the same as optical circuit (see, e.g., Battou et al, U.S. Patent 7,013,084 B2, col. 31, line 51).

6. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Desnoyers et al. as applied to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79 above, and further in view of Deo ("Graph Theory with Applications to Engineering and Computer Science" by Narsingh Deo, Prentice-Hall, 1974, pp. 20-21).

Ho et al., Smith et al., Roorda et al. and Desnoyers et al. have been discussed above in regard to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79. Smith et al. teaches in col. 7, line 60 that path cost is the sum of the costs of nodes and links that constitute the path. As additional evidence, Deo teaches in page 20, third paragraph to represent a path as a series of

nodes and the interconnecting link over which the path travels, e.g., the path of FIG. 2-8(b) is represented as "v_1 a v_2 b v_3 d v_4". One of ordinary skill in the art would have been motivated to combine the teaching of Deo with the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because graph theory is used in computer programming for solving network related programs. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to represent a path as a series of nodes and the interconnecting link over which the path travels, as taught by Deo, in the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because graph theory is used in computer programming for solving network related programs.

7. Claims 8-10, 21-23, 71-72 and 80-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Desnoyers et al. as applied to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79 above, and further in view of Ho et al.2 (P. Ho et al., "A Framework for Service-Guaranteed Shared Protection in WDM Mesh Networks", IEEE Communications Magazine, February 2002).

Ho et al., Smith et al., Roorda et al. and Desnoyers et al. have been discussed above in regard to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79. Regarding claims 8, 21, 71, 80 and 82, the difference between Ho et al., Smith et al., Roorda et al. and Desnoyers et al. and the claimed invention is that Ho et al., Smith et al., Roorda et al. and Desnoyers et al. do not teach protection. Ho et al.2 teaches on page 99, left col., second paragraph path-based protection such that when a fault occurs on the working path, the source activates the configuration of the nodes along the protection path and switches traffic over from the working path to the protection path. Ho et al.2 teaches on page 98, left col., first paragraph node disjoint lightpaths for working

and protection paths. One of ordinary skill in the art would have been motivated to combine the teaching of Ho et al.2 with the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because protection scheme protects against fault and provides continuous service to customers. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include protection scheme, as taught by Ho et al.2, in the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because protection scheme protects against fault and provides continuous service to customers.

Regarding claims 9, 22, 72, 81 and 83 Ho et al.2 teaches on page 98, left col., first paragraph node disjoint lightpaths for working and protection paths.

Regarding claims 10 and 23, node-disjoint implies link-disjoint.

8. Claims 13 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Desnoyers et al. as applied to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79 above, and further in view of Jukan et al. (A. Jukan et al., "Constraint-Based Path Selection Methods for On-Demand Provisioning in WDM Networks", IEEE INFOCOM, 2002).

Ho et al., Smith et al., Roorda et al. and Desnoyers et al. have been discussed above in regard to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79. The difference between Ho et al., Smith et al., Roorda et al. and Desnoyers et al. and the claimed invention is that Ho et al., Smith et al., Roorda et al. and Desnoyers et al. do not teach a path information message for probing potential paths. Jukan et al. teaches on page 831, right col. distributed discovery of wavelength paths (DWP) where a path information message is sent to collect path information. One of ordinary skill in the art would have been motivated to combine the teaching of Jukan et

al. with the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because DWP is simple and gives better performance than shortest path as illustrated in FIG. 3 of Jukan et al. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use path information message and DWP for finding available paths, as taught by Jukan et al., in the modified optical network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because DWP is simple and gives better performance than shortest path method.

9. Claims 14, 17, 20 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (P. Ho et al., "A Novel Distributed Control Protocol in Dynamic Wavelength-Routed Optical Networks", IEEE Communications Magazine, November 2002) in view of Smith et al. (U.S. Patent 7,171,124 B2), Roorda et al. (U.S. Patent Application Pub. 2002/0186432 A1) and Chaudhuri et al. (U.S. Patent 7,039,009 B2).

Regarding claim 14, Ho et al. teaches in FIG. 4 an optical network including a plurality of nodes. Ho et al. teaches on page 39, right col. partially adaptive routing wherein each source node is provided with a routing table (equivalent to database of instant claim), in which paths to all its destinations are stored. Ho et al. teaches on page 38, right col., last paragraph wavelength continuity constraint for each lightpath, i.e., the lightpaths represent conversion free connectivity. When a connection request arrives, the source node selects a path from all the available ones from a routing table. Ho et al. teaches on page 39, right col., second paragraph message scheme for updating the routing table. Ho et al. teaches to send probe messages along potential destinations, i.e., only nodes reachable through said conversion free connectivity. Ho et al. teaches on page 40, left col., first paragraph to use customer-defined cost function and link state metrics to select one of the feasible lightpaths for a connection request. Ho et al. teaches on page

39, right col., last paragraph to page 40, left col., first, paragraph to select a lightpath and a wavelength for a connection request. The difference between Ho et al. and the claimed invention is that Ho et al. does not teach grouping paths based on common destination nodes. Smith et al. teaches in FIG. 5B and FIG. 6B grouping paths with common destination nodes for evaluating and selecting the best path for routing. One of ordinary skill in the art would have been motivated to combine the teaching of Smith et al. with the optical network of Ho et al. because when selecting the best path to a destination, it is necessary to compare and evaluate them to make a decision. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to group paths with common destination nodes, as taught by Smith et al., in the optical network of Ho et al. because when selecting the best path to a destination, it is necessary to compare and evaluate them to make a decision.

The combination of Ho et al. and Smith et al. still fails to teach that a source node can have connections to two difference destinations. It is common sense the network of FIG. 1 is meant to provide connections between any pairs of nodes. It is also obvious that the same method can be applied a plurality of times to find multiple paths from one source node to a plurality of destinations. In fact, Smith et al. cites in col. 4, lines 10-12 Roorda et al. for teaching the operation of the network of FIG. 1. Roorda et al. teaches in FIG. 3A that there are a path between node 20-1 and node 20-2 and a path between node 20-1 and node 20-4. One of ordinary skill in the art would have been motivated to combine the teaching of Roorda et al. with the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resource and is costly and not flexible. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of connections

from one source node to a plurality of destinations, as taught by Roorda et al., in the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resources and is costly and not flexible.

The combination of Ho et al., Smith et al. and Roorda et al. still fails to teach receipt of messages that include the end to end identification. Chaudhuri et al. teaches in col. 14, lines 15-38 to use probe messages for getting path information. One of ordinary skill in the art would have been motivated to combine the teaching of Chaudhuri et al. with the modified optical network of Ho et al., Smith et al. and Roorda et al. because the probe message collects necessary information for the access node to make routing decision. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive response message for carry path information, as taught by Chaudhuri et al., in the modified optical network of Ho et al., Smith et al. and Roorda et al. because the probe message collects necessary information for the access node to make routing decision.

Regarding claim 17, Ho et al. teaches on page 38, right col., first paragraph lightpaths.

Regarding claim 20, Ho et al. teaches on page 39, right col., last paragraph to page 40, left col., first paragraph to select a lightpath and a wavelength for a connection request.

Regarding claims 24-25, Ho et al. teaches on page 40, left col., first paragraph to select a lightpath for a connection request.

Regarding claim 26-27, Ho et al. teaches a distributed architecture where each node builds and maintains its database.

10. Claims 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Chaudhuri et al. as applied to claims 14, 17, 20 and 24-27 above, and further in view of Moy (J. Moy, "OSPF Version 2", RFC 2328, IETF, April 1998).

Ho et al., Smith et al., Roorda et al. and Chaudhuri et al. have been discussed above in regard to claims 14, 17, 20 and 24-27. The difference between Ho et al., Smith et al. and Roorda et al. and the claimed invention is that Ho et al., Smith et al., Roorda et al. and Chaudhuri et al. do not teach using OSPF. Ho et al. teaches on page 39, left col., first paragraph routing using link state information. It is well known in the art that there are two standards for link state routing, namely IS-IS and OSPF. Moy teaches OSPF which is an IETF protocol for exchanging link state information among nodes in a network and calculating network topology and finding shortest path base on link state database. One of ordinary skill in the art would have been motivated to combine the teaching of Moy with the modified optical network of Ho et al., Smith et al., Roorda et al. and Chaudhuri et al. because OSPF of Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use OSPF, as taught by Moy, in the modified optical network of Ho et al., Smith et al., Roorda et al. and Chaudhuri et al. because OSPF of Moy is widely deployed in the Internet and using OSPF of Moy ensures compatibility with other popular products that have already deployed in the field.

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Desnoyers et al. as applied to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27,

70, 73-74 and 76-79 above, and further in view of Pulkkinen et al. (U.S. Patent Application Pub. 2003/0172356 A1).

Ho et al., Smith et al., Roorda et al. and Desnoyers et al. have been discussed above in regard to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79. The difference between Ho et al., Smith et al., Roorda et al. and Desnoyers et al. and the claimed invention is that Ho et al., Smith et al., Roorda et al. and Desnoyers et al. do not teach a centralized management system. However, centralized management of distributed database is well known in the art. For example, Pulkkinen et al. teaches centralized management of a distributed database (see paragraph [0012]. One of ordinary skill in the art would have been motivated to combine the teaching of Pulkkinen et al. with the modified WDM network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because centralized management coordinates the local databases to ensure their consistency and provides powerful computation power that is shared among local databases. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a centralized management system for maintaining local database of each node, as taught by Pulkkinen et al., in the modified WDM network of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because centralized management coordinates the local databases to ensure their consistency and provides powerful computation power that is shared among local databases.

12. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., Smith et al., Roorda et al. and Desnoyers et al. as applied to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79 above, and further in view of Shami et al. (A. Shami et al., "Performance

Evaluation of Two GMPLS-Based Distributed Control and Management Protocols for Dynamic Lightpath Provisioning in Future IP Networks", IEEE, 2002).

Ho et al., Smith et al., Roorda et al. and Desnoyers et al. have been discussed above in regard to claims 1-2, 4, 7, 11-12, 14, 17, 20, 24-27, 70, 73-74 and 76-79. The difference between Ho et al., Smith et al., Roorda et al. and Desnoyers et al. and the claimed invention is that Ho et al., Smith et al., Roorda et al. and Desnoyers et al. do not teach to keep track of the wavelength status. Shami et al. teaches in p. 2290, right col., second paragraph that each node of a WDM network has a controller for maintaining status of every wavelength on every link emerging from that node. One of ordinary skill in the art would have been motivated to combine the teaching of Shami et al. with the modified WDM network method of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths. Thus it would have been obvious to one Of ordinary skill in the art at the time the invention was made to include a link channel set for maintaining status of every wavelength on every link emerging from that node, as taught by Shami et al., in the modified WDM network method of Ho et al., Smith et al., Roorda et al. and Desnoyers et al. because such link status and wavelength assignment information is critical for controlling the cross-connect and for determining available wavelengths that can be assigned for new paths.

Response to Arguments

13. Applicant's arguments filed 15 June 2009 have been fully considered but they are not persuasive.

The Applicant argues "Applicant believes this limitation is definite as a basis for this claim limitation is found in Figures 15-19 and paragraphs 157-183, in which Applicant's network topology databases are created using the distributed search technique and not in response to a request to a lightpath. Furthermore, Applicant discloses in Figure 20 and paragraphs 185-188 disclose that the system allocates a lightpath in response to receiving message that indicates a request for a path/wavelength combination." However, the cited figures and paragraphs fail to teach "wherein said databases are not specific to or created responsive to path request messages". Instant specification teaches in paragraph [0068] "Such a database may be built, maintained, structured, used, etc. in a variety of ways; exemplary ones of which are described herein". The example cited by the applicant does not responsive to path request message. However, this does not imply that the variety of ways of building, maintaining the database are not specific to or created responsive to path request messages.

The Applicant argues "Desnoyers discloses the destination node sending the path information, but not from a node that is coupled to the destination node. Because Desnoyers discloses the destination node sending the path information, and not a node coupled to the destination node, Desnoyers does not teach or suggest maintaining a network topology database by receipt of response messages that include end to end path identification, wherein each of said message include end to end path information transmitted from a node in that end to end path that is coupled to the destination node of that end to end path and an end to end path comprises a series of three or more nodes." The Examiner disagrees. Desnoyers et al. teaches in col. 5, lines 28-67 that both the switching node and the computer will response to the connectivity request message.

The Applicant argues that "the Examiner admits that Smith fails to disclose grouping of paths to common destination nodes, but states that it is obvious 'that the same method can be applied a plurality of times to find multiple paths from one source node to a plurality of destinations' (Id.). However, this is not what Applicant claims in claim 1, 14, 70, and 76." The Examiner disagrees. The Examiner states in the Office Action "The combination of Ho et al. and Smith et al. still fails to teach that a source node can have connections to two difference destinations. It is common sense the network of FIG. 1 is meant to provide connections between any pairs of nodes. It is also obvious that the same method can be applied a plurality of times to find multiple paths from one source node to a plurality of destinations. In fact, Smith et al. cites in col. 4, lines 10-12 Roorda et al. for teaching the operation of the network of FIG. 1. Roorda et al. teaches in FIG. 3A that there are a path between node 20-1 and node 20-2 and a path between node 20-1 and node 20-4. One of ordinary skill in the art would have been motivated to combine the teaching of Roorda et al. with the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resource and is costly and not flexible. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of connections from one source node to a plurality of destinations, as taught by Roorda et al., in the modified optical network of Ho et al. and Smith et al. because the traditional pt-pt network does not share resources and is costly and not flexible."

The Applicant argues "Applying Smith's path selection method a plurality of times at one access node would result in a plurality of transient independent source-destination sets of paths stored in memory. Each set of paths is created solely in response to separate requests for a path. The sets of paths are then destroyed after that request is fulfilled. However, these sets of

transient, independent sets of paths stored in memory would not be considered a database to one of ordinary skill in the art." The Examiner disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Desnoyers et al. clearly teaches in col. 3, lines 3 building network topology database. Smith et al. teaches that organizing paths according to destination makes it easy to select a path to a destination from among a plurality of possible paths to the same destination.

The Applicant argues "Furthermore, it would not be obvious to one of skill in the art to modify Smith to organizing multiple paths to multiple destinations with the multiple paths grouped by common destination, because Smith actually teaches away from this limitation. This is because Smith actually discloses destroying the set of paths to one destination stored for path allocation once one of those paths has been allocated (Smith, Figure 3B, step 20, Col. 8, Lines 57-60). Thus, as Smith actually teaches away organizing multiple paths to multiple destinations, with the multiple paths grouped by common destination, it would not be obvious to one of skill in the art to modify Smith." The Examiner disagrees. The Applicant errs to limit the prior art references to only those that addresses the precise problem that the patentee was trying to solve. It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like piece of a puzzle. See KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 82 USPQ2d 1385 (U.S. 2007).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (6:30 a.m. - 4:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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skl
25 August 2009

/Shi K. Li/
Primary Examiner, Art Unit 2613